

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
LEANDRO ARECHEDERRA
EXXONMOBIL CHEMICAL COMPANY
LAW TECHNOLOGY
P. O. BOX 219
BAYTOWN, TX 77522-2149

10/539013
PCT

WRITTEN OPINION

(PCT Rule 66)

		Date of Mailing (day/month/year) 26 APR 2005
Applicant's or agent's file reference 2003B133E		REPLY DUE within 1 months/days from the above date of mailing
International application No. PCT/US03/41221	International filing date (day/month/year) 19 December 2003 (19.12.2003)	Priority date (day/month/year) 20 December 2002 (20.12.2002)
International Patent Classification (IPC) or both national classification and IPC IPC(7): C08F 2/06, 4/44, 4/64, 4/68 and US Cl.: 526/70, 90, 125.7, 144, 185, 206, 226		
Applicant EXXONMOBIL CHEMICAL PATENTS INC.		

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:

- I Basis of the opinion
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

ACKNOWLEDGED
PATENT LEGAL ASSISTANT GROUP
G. M. CARROLL

APR 29 2005

FYI
 Reminder
 File

EMCLT
BAYTOWN

3. The applicant is hereby **invited to reply** to this opinion.
- When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).
- How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.
- Also For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: **20 April 2005 (20.04.2005)**.

Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/ US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Roberto Rábago Telephone No. (571) 272-1700	DEBORAH A. THOMAS PARALEGAL SPECIALIST GROUP 1900 <i>dat</i>
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I. Basis of the opinion

1. With regard to the elements of the international application:*

the international application as originally filed

the description:

pages 1-106, as originally filed

pages NONE, filed with the demand

pages NONE, filed with the letter of _____

the claims:

pages 107-121, as originally filed

pages NONE, as amended (together with any statement) under Article 19

pages NONE, filed with the demand

pages NONE, filed with the letter of _____

the drawings:

pages 1-8, as originally filed

pages NONE, filed with the demand

pages NONE, filed with the letter of _____

the sequence listing part of the description:

pages NONE, as originally filed

pages NONE, filed with the demand

pages NONE, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

the language of publication of the international application (under Rule 48.3(b)).

the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

contained in the international application in printed form.

filed together with the international application in computer readable form.

furnished subsequently to this Authority in written form.

furnished subsequently to this Authority in computer readable form.

The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

the description, pages NONE _____

the claims, Nos. NONE _____

the drawings, sheets/fig NONE _____

5. This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

WRITTEN OPINIONInternational application No.
PCT/US03/41221**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>6,13,16,30-50 and 54</u>	YES
	Claims <u>1-5,7-12,14,15,17-29,51-53 and 55-62</u>	NO
Inventive Step (IS)	Claims <u>6,13,16,30-50 and 54</u>	YES
	Claims <u>1-5,7-12,14,15,17-29,51-53 and 55-62</u>	NO
Industrial Applicability (IA)	Claims <u>1-62</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Claims 1-5, 7-12, 14-15, 17-29, 51-53 and 55-62 lack novelty under PCT Article 33(2) as being anticipated by Konig et al. (US 4,501,865). The reference discloses a polymerization method comprising a hydrofluorocarbon diluent in a stirred autoclave reactor wherein the polymerization medium is evaporated during polymerization (col. 2, line 49 through col. 5, line 68, also patented claim 1). Although not shown in the working examples, the use of a hydrofluorocarbon diluent is specifically suggested in the cited text. Therefore, the claims lack novelty over this reference.

Claims 1-5, 7, 18-29, 52-53 and 55-62 lack novelty under PCT Article 33(2) as being anticipated by Suling et al. (US 4,255,546). The reference discloses a polymerization method comprising a hydrofluorocarbon diluent in a stirred autoclave reactor wherein the polymerization medium is refluxed during polymerization (col. 2, line 22 through col. 5, line 42, also patented claims 1-6). Although not shown in the working examples, the use of a hydrofluorocarbon diluent is specifically suggested in the cited text. Therefore, the claims lack novelty over this reference.

Claims 1-62 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----

WRITTEN OPINION

International application No.
PCT/.../41221

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

TIME LIMIT:

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

PATENT COOPERATION TREATY

LAA/JS
201
Gmc

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT
OR THE DECLARATION

(PCT Rule 44.1)

To: LEANDRO ARECHEDERRA EXXONMOBIL CHEMICAL COMPANY LAW TECHNOLOGY P.O. BOX 2149 BAYTOWN, TX 77522-2149	Date of Mailing (day/month/year)
Applicant's or agent's file reference 2003B133E	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US03/41221	International filing date (day/month/year) 19 December 2003 (19.12.2003)
Applicant EXXONMOBIL CHEMICAL PATENTS IN.	

1. The applicant is hereby notified that the international search report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 40).

When? The time limit for filing such amendments is normally two months from the date of transmission of the international search report.

Where? Directly to the International Bureau of WIPO, 34, chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90 bis.1 and 90 bis.3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230 Form PCT/ISA/220 (April 2002)	Authorized officer Roberto Rábago Telephone No. (571) 272-1700	<i>J. Whitfield</i> for <i>[Signature]</i>
RECEIVED NOV 09 2004 EMC/LBPC BAYTOWN		(See notes on accompanying sheet)

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
 LEANDRO ARECHEDERRA
 EXXONMOBIL CHEMICAL COMPANY
 LAW TECHNOLOGY
 P.O. BOX 2149
 BAYTOWN, TX 77522-2149

PCT

NOTIFICATION OF TRANSMITTAL OF
 THE INTERNATIONAL SEARCH REPORT
 OR THE DECLARATION

(PCT Rule 44.1)

Date of Mailing
 (day/month/year)

05 NOV 2004

Applicant's or agent's file reference 2003B133E	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US03/41221	International filing date (day/month/year) 19 December 2003 (19.12.2003)
Applicant EXXONMOBIL CHEMICAL PATENTS IN.	

1. The applicant is hereby notified that the international search report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

Where? Directly to the International Bureau of WIPO, 34, chemin des Colombettes
 1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

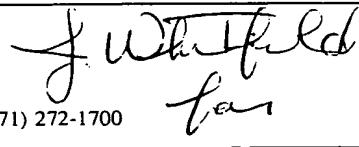
4. Reminders

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90 bis.1 and 90 bis.3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Roberto Rábago Telephone No. (571) 272-1700	
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/US03/41221	International filing date (<i>day/month/year</i>) 19 December 2003 (19.12.2003)	(Earliest) Priority Date (<i>day/month/year</i>) 20 December 2002 (20.12.2002)
Applicant EXXONMOBIL CHEMICAL PATENTS IN.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the Report**
 - a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
 - b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:
 - contained in the international application in written form.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority in written form.
 - furnished subsequently to this Authority in computer readable form.
 - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2.
3.
4. With regard to the title,
 - the text is approved as submitted by the applicant.
 - the text has been established by this Authority to read as follows:
5. With regard to the abstract,
 - the text is approved as submitted by the applicant.
 - the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the drawings to be published with the abstract is Figure No. _____
 - as suggested by the applicant.
 - because the applicant failed to suggest a figure.
 - because this figure better characterizes the invention.



None of the figures

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/41221

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C08F 2/06,4/44,4/64,4/68
 US CL : 526/70,90,125.7,144,185,206,226

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 526/70,90,125.7,144,185,206,226

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
EAST

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,501,865 A (KONIG et al.) 26 February 1985 (26.02.1985) col. 2, line 49 through col. 5, line 68.	1-5,7-15,17-29,51-53,55,58-62
X	US 4,255,546 A (SULING et al.) 10 March 1981 (10.03.1981) col. 2, line 22 through col. 5, line 42.	1-5,7-15,18-29,52-53,55-62
A	US 4,248,988 A (HALASA) 02 February 1981 (03.02.1981) entire document.	1-62
A	US 2,548,415 A (WELCH et al.) 10 April 1951(10.04.1951) entire document.	1-62

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means		
"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

19 October 2004 (19.10.2004)

Date of mailing of the international search report

05 NOV 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450

Faxsimile No. (703) 305-3230

Authorized officer

Roberto Rábago

Telephone No. (571) 272-1700

PATENT COOPERATION TREATY

PCT

FILE COPY

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2003B133E	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US03/41221	International filing date (day/month/year) 19 December 2003 (19.12.2003)	Priority date (day/month/year) 20 December 2002 (20.12.2002)
International Patent Classification (IPC) or national classification and IPC IPC(7): C08F 2/06, 4/44, 4/64, 4/68 and US Cl.: 526/70,90,125.7, 144,185,206,226		
Applicant MILNER ET AL.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

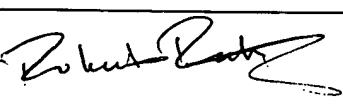
2. This REPORT consists of a total of ___ sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of ___ sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of report with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 16 July 2004 (16.07.2004)	Date of completion of this report 22 June 2005 (22.06.2005)
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/ US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Roberto Rabago  Telephone No. (571) 272-1700

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US03/41221

FILE COPY**I. Basis of the report**

1. With regard to the elements of the international application:*

the international application as originally filed.

the description:

pages 1-106 as originally filed

pages NONE, filed with the demandpages NONE, filed with the letter of _____.

the claims:

pages 108-121, as originally filed

pages NONE, as amended (together with any statement) under Article 19pages NONE, filed with the demandpages 107, filed with the letter of 27 May 2005 (27.05.2005).

the drawings:

pages 1-8, as originally filed

pages NONE, filed with the demandpages NONE, filed with the letter of _____.

the sequence listing part of the description:

pages NONE, as originally filedpages NONE, filed with the demandpages NONE, filed with the letter of _____.

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

the language of publication of the international application (under Rule 48.3(b)).

the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

contained in the international application in printed form.

filed together with the international application in computer readable form.

furnished subsequently to this Authority in written form.

furnished subsequently to this Authority in computer readable form.

The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:
the description, pages NONE

the claims, Nos. NONE

the drawings, sheets/fig NONE

This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US03/41221**FILE COPY****V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>1-61</u>	YES
	Claims <u>62</u>	NO
Inventive Step (IS)	Claims <u>1-61</u>	YES
	Claims <u>62</u>	NO
Industrial Applicability (IA)	Claims <u>1-62</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Claim 62 lacks novelty under PCT Article 33(2) as being anticipated by each individually of Konig et al. (US 4,501,865) and Suling et al. (US 4,255,546). The claim recites a polymer which is devoid of any specific properties, described only in the broad context of its method of manufacture, which itself is substantially unlimited. Accordingly, there is nothing on this record which would indicate that the polymers within the scope of those disclosed and exemplified in the cited references are not within the scope of those claimed. Therefore, the claim lacks novelty.

Claims 1-61 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest the process wherein the polymerization is a cationic polymerization. As discussed in the prior written opinion, each of Konig et al. (US 4,501,865) and Suling et al. (US 4,255,546) disclose polymerization methods comprising HFC diluent wherein the polymerization medium is evaporated during polymerization. However, these references do not disclose cationic polymerization in combination with these conditions.

Claims 1-62 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----